WHITE MOUNTAIN
HEALTH CLINIC

ALASKA RURAL PRIMARY CARE FACILITY

ASSESSMENT AND INVENTORY SURVEY REPORT

FEBRUARY 28, 2002

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

DENALI COMMISSION ALASKA

NSHC
Norton Sound Health Corporation

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1. EXECUTIVE SUMMARY

A. OVERVIEW

The purpose of this report is to document rural community health program clinic needs. Those needs have been assessed from several perspectives. This is the second stage of the planning and implementation process for improving the quality of rural primary care through capital improvements to community clinics.

The first stage was development of the "Alaska Rural Primary Care Facility Needs Assessment" dated 10/23/2000. The purpose in part of this effort was to establish base lines for the planning and implementation to follow. This second stage is to document rural community health clinic needs and conditions from several perspectives as follows:

1) A spatial assessment involving spaces (as-built floor plan) for comparison with pre-established Alaska Rural Primary Care Facility (ARPCF) space basis, as set forth in the ARPCF needs assessment dated 10/23/2000.
2) A code and condition survey of the existing facility
3) Identification of a site for a new facility (if applicable/decided) and the status of services to that site (road, electricity, water, sewer, etc.).
4) Documentation of functional inputs as communicated by local people or observed by the assessment team (Note: functional planning was a component of the needs assessment in the stage 1).
5) Development of options to facilitate programmatic and technical needs and deficiencies,
6) Costing of those options and,
7) Recommendations as to the option or options that best address the clinic need and deficiencies[1].

ARPCF clinic basis were standards established in stage 1 based on population. They translate into three clinic sizes as follows:

Small Clinic
- Population: 20-100
- Space Standard: 1,535 gsf (heated)

Medium Clinic
- Population: 101-500
- Space Standard: 1,989 gsf (heated)

Large Clinic
- Population: 501+
- Space Standard: 2,459 gsf (heated)[2]

[1] There are only four options available in any rural community as follows: 1) New Facility, 2) Existing Facility renovations and or additions, 3) limited scope renovations and/or additions – driven by committed funding from either capital or operating perspectives (this option is not costable without scope or funding definition), 4) status quo (no change) (note: any of these options can apply to combined facilities existing or envisioned.)

[2] The intent of the code and condition survey is to identify and cost deficiencies inclusive of spatial deficiencies. The accumulation of those costs is then intended to be compared to the cost of a new clinic. If the costs of renovations and additions exceed 75% of new construction then a new clinic option is considered viable.

White Mountain has a population of 203 (2000 Census). This qualifies it for a medium size clinic of 1,989 gsf resulting in a spatial deficiency of 709 gsf. The facility is approximately 8 years old (built 1993). It is a foam panel structure. (walls, floor and roof) with glue laminated floor beams set on braced posts to (reportedly) treated wood pads. Given its age, construction type, foundation, site placement, adequate city power services, and water services it would appear to be a suitable candidate for renovations and additions. However, members of the community saw it as less less of a dandidate for renovation as addressed further on. Drawing A4 "Renovation and additions implication floor plan" has been prepared as one option along with code and condition deficiencies and additions addressed.

Key community issues and perspectives are as follows:

- Trauma patients are administered to in the waiting area, as it is the only space large enough.
- The community is concerned about the insulated panel floors because of flooding that has occurred due to sewer backups.
- The community is concerned about minor building settling. They report that the building is on post and pad on gravel to bedrock (bedrock is reportedly close to the surface).
- Itinerant space is essential in this community.
- Regarding population, the community reports it is increasing with people moving back home.
- The community wants a new clinic.
- Health aides note the following shortages; office space; medical records; dental clinic equipment and operation - i.e. impact of special clinics.

B. Renovation/Upgrade and Addition

This option is as previously discussed under A Overview. Its probable impacts are diagramed in drawing A4 that is an overlay of ARPCF spaces onto the existing floor plan. The existing White Mountain clinic sits on a somewhat restricted site. Although it is located appropriately within the community, it is on a steep uphill site that makes access for the handicapped, sick and elderly challenging at best. Considering its spatial and structural deficiencies and the projected cost for renovations and additions at more than the cost of new construction, the community would be well served with a new facility.

C. New Clinic

This option is as cost summarized in Section A Overview. It is based on ARPCF space standards set in Stage I of this planning process and as costed under section 6 new clinic analysis of this report for a medium size clinic. Considering its spatial and structural deficiencies and the projected cost for renovations and additions at more than the cost of new construction, the community would be well served with a new facility. The new site would preferably be down slope from the street that may allow level access into the facility.

The community expressed a desire for a new clinic but had not yet identified a site. It is, therefore, the recommendation of the consulting team that White Mountain receive a new clinic.

2. GENERAL INFORMATION

A. PURPOSE OF REPORT AND ASSESSMENT PROCESS

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility assessment, planning, design, and construction. Over 200 clinics will be inspected through the course of the program. The purpose of the Code and Condition survey report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need between the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 3 and 4. The information gathered will be tabulated and analyzed according to a asset of fixed criteria that should yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most efficient means to bring the clinics up to a uniform standard of program and construction quality.

A team of professional Architects and Engineers traveled to the site and completed a detailed Field Report that was revised by all parties. Subsequently, the team completed a draft and then final report of the facility condition.

B. ASSESSMENT TEAM

The survey was conducted on December 12, 2001 by Robert F. Bezek, Architect, Bezek Durst Seiser, Inc. and Charlie Chien M.E. PDC, Inc., and Lloyd Persson, ANTHC. ANTHC made introductions and conducted village briefings to ensure complete understanding of the inspection process. Village contacts were: Ed Titus; Pierre Costello, ANTHC Project Engineer; Chuck Simon, BMW NSHC; Dorothy Barr, City Clerk; Tom Gray, Mayor; Rita Buck, CHP/ Vice Mayor; James Bergemeschi Jr.; Carol Ashenfelter, CHP; and Ida Lincoln, Clinic Travel Clerk. Team members who assisted in the preparation of the report from information gathered included members of the field team above and Robert Bezek, Bezek Durst Seiser, Inc., and Charlie Chien M.E. PDC, Inc.

C. REPORT FORMAT

The format adopted is a modified “Deep Look” format, a facilities investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to building code compliance, general facility condition, and spatial deficiencies. The written report includes these evaluations, in addition to sketches of building construction details and identification of potential sites (where available) for a new clinic. This information is available for viewing at ANTHC’s Anchorage offices and will be held for reference.

D. SITE INVESTIGATION

On December 12, 2001 the team flew to the sight. After an initial briefing of local persons on site, the A/E team proceeded to document the facility from a code and condition perspective. This included as-builting

the floor plans for later comparison with the ARPCF basis. Concluding this survey, the team again met with local people to share with them the initial findings of the survey, and to gather their inputs as to existing clinic contexts and new facility perspectives.

3. CLINIC INSPECTION SUMMARY

A. COMMUNITY INFORMATION

Population:

- 203 (2000 Census)
- 2nd Class City, Unorganized, Bering Straights Schools, Bering Straights Native Corp.

Location: White Mountain is located on the west bank of the Fish River, near the head of Golovin Lagoon, on the Seward Peninsula. It is 63 miles east of Nome. It lies at approximately 64d 41m N Latitude, 163d 24m W Longitude. (Sec. 26, T009S, R024W, Kateel River Meridian.) White Mountain is located in the Cape Nome Recording District. The area encompasses 1.8 sq. miles of land and .2 sq. miles of water.

History: The Eskimo fish camp of "Nutchirviq" was located here. The bountiful resources of both the Fish and Niukluk Rivers supported the area's Native populations. White Mountain grew after the influx of prospectors during the gold rush of 1900. The first structure was a warehouse built by the miner Charles Lane to store supplies for his claim in the Council District. It was the site of a government-subsidized orphanage, which became an industrial school in 1926. A post office was opened in 1932. The City government was incorporated in 1969.

Culture: White Mountain is an Kawerak Eskimo village, with historical influences from the gold rush. Subsistence activities are prevalent.

Economy: The entire population depends on subsistence hunting and fishing, and most spend the entire summer at fish camps. Salmon, other fish, beluga whale, seal, moose, reindeer, and brown bear are utilized. The school, native store and White Mountain Lodge provide the only local employment. Construction outside of town and firefighting provide seasonal employment. Four residents hold commercial fishing permits. Ivory and bone carvings contribute some cash. A reindeer farm is run by a local resident.

Facilities: Water is derived from a well near the Fish River and is treated. 48 households and facilities are connected to the piped water and sewer system. 18 additional households haul honey buckets. The school operates its own water and sewer system, but wants to be connected to the City system. 15 HUD homes are under development, and a Master Plan is underway to examine system expansion alternatives. Funding has been requested to relocate the landfill; the current site is not permitted.

Transportation: Access to White Mountain is by air and sea. There are no roads. The 3,000' gravel runway is operated by the State, and scheduled flights are available daily from Nome. There is no dock in the village; supplies are lightered from Nome and offloaded on the beach. Cargo barges cannot currently land at White Mountain. Locals are interested in a road to Golovin to permit fuel deliveries, or the construction of a docking facility for barges.

Climate: White Mountain has a transitional climate with less extreme seasonal and daily temperatures than Interior Alaska. Continental influences prevail in the ice-bound winter. Average summer temperatures

range from 43 to 80; winter temperatures average -7 to 15. Annual precipitation is 15 inches, with 60 inches of snow. The Fish River freezes up in November; break-up occurs in early June.

B. General Clinic Information

1) Physical Plant Information

The White Mountain clinic occupies 1,280 gsf and was constructed in 1994. White Mountains population is 203 (2000 Census). Its ARPCF basis is a medium clinic at 1,989 gsf, which creates an overall space deficiency of 709 gsf. It is a residential[3] structure consisting of foam panel construction roof walls and floors are on glue laminated beams and a braced wood and post pad foundation system sitting on a structural gravel pad. Bedrock was reported to be not far below the surface. The facility is connected to city sewer and water (note the sewer reportedly backs up and the floors were redone approximately 2 years ago with new underlayment and flooring. The community has expressed concern about degradation of the foam panel system below). The facility is heated with an oil-fired furnace. It has a type of grand stair (stepped ramp) to the original entrance, which has now been converted to a CTC office/medical records space. A new gable end entrance was added at some point. This entrance has a ramp that runs down hill in an attempt to match the natural slope; it has not worked well because the facility is located uphill from the road access. Had the facility been located downhill from the road access, it could have been entered at floor level with the serving street, but the current situation has both functional and handicapped accessibility problems.

2) Community Program Sheet

Attached at the end of this section is the Community Program Sheet completed by the City of White Mountain.

[3] The use of the term residential has the following assumed meanings:
Structural – residential live loads usually range from 20 to 40 psf. The minimum live loads for clinics should be 50 psf in the office areas. For computer use areas the load can be as much as 100 psf. Operating rooms and laboratories are generally designed with a live load of 60 psf. With the village clinics being relatively small, I would probably design the entire floor system at 60 psf with the exception of the record keeping area. This area should be designed for a minimum of 100 psf.

C. PROGRAM DEFICIENCY NARRATIVE

1) Space Requirements and Deficiencies

SPACE COMPARISON MATRIX

Current White Mountain Actual SF to Denali Commission Medium Clinic

Alaska Rural Primary Care Facility

				Current Clinic			Medium Clinic					
Purpose / Activity	Designated Itinerant			Actual Net S.F.			ARPCF SF			Difference		
	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)
Arctic Entries				0	0	0	50	2	100			-100
Waiting/Recep/Closet (Trauma)				327	1	327	150	1	150			177
Trauma/Telemed/Exam				0	0	0	200	1	200			-200
Office/Exam (Exam)				170	1	170	150	1	150			20
Admin./Records (Office/Pharmacy)				115	1	115	110	1	110			5
Pharmacy/Lab (Exam/Lab)				94	1	94	80	1	80			14
Portable X-ray				0	1	0			0			0
Specialty Clinic/Health Ed/Conf. (Office/Medical Records)				109	1	109	150	1	150			-41
Patient Holding/Sleeping Room				199	1	199	80	1	80			119
Storage				57	1	57	100	1	100			-43
HC Toilet				78	1	78	60	2	120			-42
Janitor's Closet				50	1	50	30	1	30			20
									0			0
									0			0
Subtotal Net Area						1199			1270			-71
Circulation & Net/Gross Conv. @45%						46			572			-526
Subtotal (GSF)						1245			1842			597
Mechanical Space @ 8%						35			147			-112
Total Heated Space						1280			1989			-709
Morgue (unheated enclosed space)							30	1	30			-30
Ext. Ramps, Stairs, Loading		HC Accessible			As Required			As Required			As Required	

a. Overall Space Deficiencies: The overall space deficiency is 709 gsf.

b. Specific Room Deficiencies: There are no arctic entries, there is no trauma telemedicine/exam room. Trauma is managed by moving furniture around in the waiting area. There is a storage deficiency, as well as handicapped restroom deficiencies.

c. Other Size Issues: The mechanical room is very tight, and it adjoins a janitors space that is used for storage.

2) Building Issues

a. Arctic Entries: Although the entry is relatively handicapped accessible, the ramp extends downhill to match the existing grade and it is steep. Although the door is 4'8" wide, getting a gurney up the slope and into the building appears to be difficult.

b. Waiting / Reception: The waiting area is a grand central area, as previously described. Although the space appears large, it is deceptive as this is where traumas are handled. It is an unusual configuration when measured against the ARPCF basis.

c. Exam / Trauma: The exam room is not set up for trauma. It is acceptable as an exam room except that a dental chair is stored there due to lack of specialty clinic space, which results in a crowded and congested room. There is a second space used for exam, which was intended to be the lab at the front entrance of the building. It is a small room and not suitable.

d. Exam Room: The exam room is adequate but there is no formal trauma room. Trauma is handled in the waiting area.

e. Office / Administration / Records: The office space also contains the pharmacy. It is also congested.

f. Pharmacy / Lab: As discussed in spaces above, there is no specific pharmacy/lab. The lab shares spaces with an exam room and the pharmacy shares space with the office.

g. Specialty Clinic / Health Education / Conference: None.

h. Patient Holding / Sleeping Room: There is a larger space at the back of the facility that is set up for itinerants. It contains a bunk bed and is not suitable for patient holding.

i. Storage: Storage is inadequate, although there is a storage room and the janitor's room used for storage. There is a small unheated storage building outside of the main structure. This space was not review at the time of the site visit.

j. HC Toilet Facilities: There is one restroom. The toilet, tub, and sink are not handicapped accessible.

k. Janitors Room: As previously stated there is a janitor's room, but it is affected by the lack of storage in the building.

l. Mechanical/Boiler Room: There is a mechanical room with an oil fired forced air furnace. It is very crowded and not separated from other space in a safe manner.

m. Ancillary Rooms: Not applicable.

3) Functional Design Issues

First and foremost, the facility site is contrary to the nature of clinic usage (trauma, sick, and elderly access specifically). Access into the facility requires considerable climbing. The waiting area (which has some large furniture) also serves as the trauma area. Time is of the essence in managing trauma patients – moving furniture to make room is not recommended. Combining pharmacy and office space is not conducive to security. The itinerant space is the best our team observed. The lack of a specialty clinic results in a dental chair interfering with the use of the only exam room. There is no handicapped accessible toilet or bathing.

4) Health Program Issues

a. Patient comfort and privacy: From the patient perspective, the facility had a reasonable comfort level. From a privacy perspective, the central waiting/trauma area with all doors opening onto it represented a problem.

b. Medical/Infectious Waste: Medical/infectious waste is shipped to Norton Sound Health Corporation.

c. Infection Control: The finishes seemed adequate. Infection control was not reported as a problem. However, there is no ventilation system and that is a major issue when it comes to infection control.

d. Insect and Rodent Control: None reported and or observed.

e. Housekeeping: There is a janitor's room and housekeeping was good in this facility. The itinerant room was one of the best observed by the review team.

5) Utilities

a. Water Supply: The water supply is piped city water.

b. Sewage Disposal: Sewage disposal is piped city system.

c. Electricity: Overhead lines.

d. Telephone: Overhead lines.

e. Fuel Oil: Yes.

D. Architectural / Structural Condition

1) Building Construction

a. Floor Construction: Floor construction is a plywood insulated panel set on glue laminated beams on top of post and pad, assumed treated pad, braced foundation system the insulation value is assumed to be R-44.

b. Exterior Wall Construction: The exterior walls are plywood insulated foam panels. The assumed R-value is R-20. The siding is T111. The interior material is gypsum board painted.

c. Roof Construction: The roof is constructed of plywood-insulated panels. The assumed R-value is R-44. There is gypsum board to the bottom of the panels over the main area with an assumed building paper with metal roofing on top. It is a hot roof as there is no ventilation of the roof.

d. Exterior Doors: Metal faced, good condition, proper size.

e. Exterior Windows: PVC with insulated glass.

f. Exterior Decks, Stairs, and Ramps: Painted wood with steel grating.

2) Interior Construction

a. Flooring: Sheet vinyl everywhere. Assumed plywood underlayment below.

b. Walls: The walls appear to be 2x4 construction with gypsum board finish on both sides. There is no way to determine whether or not sound insulation was used or not. The waiting area with all the doors opening into it does represent a privacy issue.

c. Ceilings: Ceilings are painted gypsum board.

d. Interior doors: Hollow core wood with wood frames and wood casing, clear finish and non-ADA accessible hardware. Overall condition is good.

e. Casework: There is approximately 34 linear feet of uppers and lowers it is residential grade casework.

f. Furnishings: Furnishings are reasonably new and in reasonably good condition. There is a mix of upholstered metal and wood furnishings.

g. Insulation: Floor insulation is assumed R-40, wall insulation is assumed R-20, and attic insulation is assumed R-40.

h. Tightness of Construction: The facility construction is very tight.

i. Arctic Design: This is good residential arctic design and construction, with the exception of the foundations, which probably should have gone to bedrock. There is some slippage of the building to the down slope side.

3) Structural

a. Foundations: The floor system is an insulated plywood panel system sitting on glue-laminated beams sitting on what is believed to be treated wood posts and pad. The pads are buried below the grade and are not observable. The posts are cross-braced with 2x wood material some of which extend into the fill material that is gravel. Local reports suggest the foundation does not go to bedrock, which may contribute to building movement.

b. Walls and Roof: Both are insulated plywood panels that use a glue laminated beam at the ridge line, along with structural plywood panels.

c. Stairs, Landings, and Ramps: These are painted wood with a steel grating, not the grip strut variety.

E. MECHANICAL CONDITION

1) Heating System

a. Fuel Storage and Distribution: An above ground single wall 500-gallon capacity heating oil storage tank installed in a steel support stand serves the clinic heating units. The fuel tank is surrounded by an open secondary containment dike. The distance between the fuel tank and the building is less than the required distance of 5 feet. The fuel tank is also connected to a piped village fuel delivery system main adjacent to the clinic building.

b. Furnace: A 70,000 Btuh oil fired forced air furnace provides the heating of the clinic building.

c. Heat Distribution System: Forced air heating is ducted to distribution throughout the building.

2) Ventilation System

a. System: The building oil fired forced air furnace is not equipped with outside air intake and the building is not equipped with separate mechanical ventilation system. The code required ventilation is satisfied by the fact that the spaces are equipped with operable windows.

b. Exhaust Air: A local exhaust system using small ceiling mounted exhaust fan is installed in the restroom. No exhaust is provided for the Janitor's closet.

3) Plumbing System

a. Water System: The building is served by municipal piped water distribution system at the building. An electric water heater in the mechanical room provides domestic hot water for the building.

b. Sewer System: The building sanitation system is connected to the municipal piped sewer system. There is clear evidence that the building sewer line experienced substantial freeze damage recently but appeared to be marginally operational at the time of the site visit for this report. This sewer line system below the building will need complete replacement as part of this program.

c. Fixtures: The fixtures observed at this building are in good condition and the exam room fixtures do conform to the acceptable general patient care requirements. The restroom fixtures do not conform to acceptable American Disability Act access requirements.

F. ELECTRICAL CONDITION

1) Electrical Service

a. The electrical service for this clinic is a 200-amp, 120/240 volt AC single-phase three-wire system.

b. The overhead service drop conductors are routed to the meter/disconnect above the roof through an unsupported mast. The mast has a conduit coupling near the top of the mast; locating the coupling near the top of the mast creates a weak spot on the conduit system.

c. The mast is lacking supports below the roof.

2) Power Distribution

a. The feeder to the Main Distribution Panel (MDP) consists of three #1 copper conductors and is undersized for a 200 amp feeder per National Electric Code (NEC) 310-15 and Table 310-16.

b. The Clinic MDP is a 20-circuit G.E. panelboard the MDP currently has 2 spare breaker spaces.

3) Grounding System

a. The electrical system does not appear to have a grounding electrode system, except for a single ground rod. A grounding electrode system is required, per NEC 250 Part C.

b. Interior metal piping of other mechanical systems is required to be bonded to the electrical service per NEC 250-104.

4) Exterior Elements

a. The clinic does not have exterior general use receptacles. The lack of exterior receptacles usually forces extension cords to be plugged in inside the building and routed through doorways, which is a violation of NEC Article 400.

b. It is recommended to install individual branch circuits and GFCI protected receptacles for automotive block heaters, commonly known as head bolt heaters.

c. Exterior lighting is provided by HPS type light fixtures mounted to the ceiling above the entries to the clinic.

5) Electrical devices and lighting

a. Duplex receptacles are the grounding type.

b. The total number of receptacles does not appear sufficient for the equipment and loads in place in the clinic.

c. Many of the duplex receptacles in the clinic showed open grounds when tested.

d. Lighting fixtures throughout the clinic are predominantly 4' surface mounted fluorescent fixtures with wrap around lenses and appear to be in good condition.

e. The wiring in the clinic is primarily non-metallic sheathed cable (NM). Health Care Facilities are required to have all receptacles and fixed electric equipment, in patient care areas, supplied by circuits in grounded metal raceways with an insulated grounding conductor.

6) Emergency System

a. Working exit light fixtures are installed.

b. Working emergency fixtures are installed.

7) Fire Alarm System

a. Residential type battery operated smoke detectors are installed throughout out the clinic. Fire alarm systems, where required by building codes must comply with the provisions of NFPA 72 (National Fire Alarm Code), NEC article 725 and the IBC Section 907.

8) Telecommunication

a. The Data Telecommunications system currently provides service to the telephone system and the "Telemed" remote diagnostic system.

b. A wall mounted data cabinet is located on the wall above the filing cabinets in the office

c. The number of data and telephone outlets is not sufficient for the clinic's current and future needs

G. Civil / Utility Condition

1) Location of Building

a. Patient Access: As previously noted, patient access is awkward as this facility is built on the uphill side of the street with a ramp angled to match the existing grade.

b. Service Access: There is a road in front of the facility, however service still needs to go up the ramp or up the stairs.

c. Other Considerations: Had the facility been built on the downhill side of road access it could have been entered at floor level.

2) Site Issues

a. Drainage: Drainage is good.

b. Snow: Given the elevation of the building, snow drifting should not be a problem.

3) Proximity of Adjacent Buildings

a. The clinic sits on the upper edge near the airport uphill side of the village, almost at the center of the village.

4) Utilities

a. Water Supply: Water supplied by a buried city system.

b. Sewage Disposal: Sewage disposal is by an underground piped city system.

c. Electricity: Overhead lines.

d. Telephone: Overhead lines.

H. EXISTING FACILITY FLOOR PLAN (SITE PLAN IF AVAILABLE):

We have attached drawings, as we have been able to identify, find, or create as part of this report. We have endeavored to provide all drawings for all the sites; however, in some cases exact existing site plans were not available. We have provided as indicated below:

A1	Site Plan
A2	Existing Facility Floor Plan
A3	Existing Typical Wall Section
A4	Addition to Existing Floor Plan
A5	Medium Clinic Floor Plan

4. DEFICIENCY EVALUATION

A. DEFICIENCY CODES:

The deficiencies are categorized according to the following deficiency codes to allow the work to be prioritized for funding. The codes are as follows:

01 Patient Care: Based on assessment of the facilities ability to support the stated services that are required to be provided at the site. Items required for the patients social environment such as storage, privacy, sensitivity to age or developmental levels, clinical needs, public telephones and furnishings for patient privacy and comfort.

02 Fire and Life Safety: These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated life safety aspects of building codes including the Uniform Building Code, International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code. Deficiencies could include inadequacies in fire barriers, smoke barriers, capacity and means of egress, door ratings, safe harbor, and fire protection equipment not covered in other deficiency codes.

03 General Safety: These deficiencies identify miscellaneous safety issues. These are items that are not necessarily code items but are conditions that are considered un-safe by common design and building practices. Corrective actions required from lack of established health care industry safety practices, and local governing body code safety requirements. I.e. Occupational Safety Health Administration (OSHA) codes & standards.

04 Environmental Quality: Deficiencies based on Federal, State and Local environmental laws and regulations and industry acceptable practices. For example this addresses DEC regulations, hazardous materials and general sanitation.

05 Program Deficiencies: These are deficiencies that show up as variations from space guidelines evaluated through industry practices and observation at the facility site and documented in the facility floor plans. These are items that are required for the delivery of medical services model currently accepted for rural Alaska. This may include space modification requirements, workflow pattern improvements, functional needs, modification or re-alignment of existing space or other items to meet the delivery of quality medical services. (Account for new space additions in DC 06 below)

06 Unmet Supportable Space Needs: These are items that are required to meet the program delivery of the clinic and may not be shown or delineated in the Alaska Primary Care Facility Space Guideline. Program modifications requiring additional supportable space directly related to an expanded program, personnel or equipment shall be identified in this section; for example additional dental space,

specialty clinic, storage, or program support space that requires additional space beyond the established program.

07 Disability Access Deficiencies: The items with this category listing are not in compliance with the Americans with Disabilities Act. This could include non-compliance with accessibility in parking, entrances, toilets, drinking fountains, elevators, telephones, fire alarm, egress and exit access ways, etc.

08 Energy Management: These deficiencies address the efficiency of lighting, heating systems/fuel types and the thermal enclosures of buildings, processes, and are required for energy conservation and good energy management.

09 Plant Management: This category is for items that are required for easy and cost efficient operational and facilities management and maintenance tasks of the physical plant.

10 Architectural M&R: Items affecting the architectural integrity of the facility, materials used, insulation, vapor retarder, attic and crawlspace ventilation, general condition of interiors, and prevention of deterioration of structure and systems.

11 Structural Deficiencies: These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.

12 Mechanical Deficiencies: These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems, interior mechanical utilities, requiring maintenance due to normal wear and tear that would result in system failure.

13 Electrical Deficiencies: These are deficiencies with normal or emergency power, electrical generating and distribution systems, interior electrical and communications utilities, fire alarm systems, power systems and communications systems within a building that should be repaired or replaced on a recurring basis due to normal wear and tear that would otherwise result in system failure.

14 Utilities M&R: This category is used for site utilities for incoming services to facilities that are required for the building to be fully operational. Deficiencies may include sewer and water lines, water wells, water tanks, natural gas and propane storage, electric power and telecommunications distribution, etc.

15 Grounds M&R: Real property grounds components that should be replaced on a recurring basis due to normal wear and tear. Deficiencies with respect to trees, sod, soil erosion, lawn sprinklers, parking, bridges, pedestrian crossings, fences, sidewalks & roadways, and site illumination etc. are considerations.

16 Painting M&R: Any painting project that is large enough to require outside contractors or coordination with other programs.

17 Roof M&R: Deficiencies in roofing, and related systems including openings and drainage.

18 Seismic Mitigation: Deficiencies in seismic structural items or other related issues to seismic design, including material improperly anchored to withstand current seismic requirements effect. The elements under consideration should include the cost incidental to the structural work like architectural and finishes demolition and repairs.

B. PHOTOGRAPHS

We have provided photographs attached which are noted to describe the various deficiencies described in the narratives and itemized in the summary below. The photos do not cover all deficiencies and are intended to provide a visual reference to persons viewing the report who are not familiar with the facility.

We have included additional photos as Appendix B for general reference. These are intended to add additional information to the specific deficiencies listed and to provide general background information.

C. COST ESTIMATE GENERAL PROVISIONS

1) New Clinic Construction

a. Base Cost: The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency). The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

- General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.
- The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

b. Project Cost Factors

- Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.
- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

c. Area Cost Factor: The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

d. Estimated Total Project Cost of New Building: This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

2) Remodel, Renovations, and Additions

a. Base Cost: The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

- The cost of Additions to clinics is estimated at a unit cost higher than new clinics due to the complexities of tying into the existing structures.
- Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

b. General Requirements Factor: General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

c. Area Cost Factor: The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

d. Contingency for Design Unknowns (Estimating Contingency): The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

e. Estimated Total Cost: This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

f. Project Cost Factors: Similar to new clinics, the following project factors have been included in Section VI of this report.

- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

g. Estimated Total Project Cost of Remodel/Addition: This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

5. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached sheets document the deficiencies; provide recommendations on how to make repairs or accommodate the needs and provide a cost estimate to accomplish the proposed modifications. The summary addresses individual deficiencies. If all deficiencies were to be addressed in a single construction project there would be cost efficiencies that are not reflected in this tabulation.

These sheets are reports from the Access Data Base of individual Deficiencies that are compiled on individual forms and attached for reference.

Refer to Section VI. New Clinic Analysis for a comparison of remodel/addition to new construction.

6. NEW CLINIC ANALYSIS

The analysis of whether a new clinic is required is based on the Denali Commission standard of evaluation that "New Construction is viable if the cost of Repair/Renovation and Addition exceeds 75% of the cost of New Construction".

We have therefore determined the cost of a New Clinic Construction to meet the Alaska Rural Primary Care Facility (ARPCF) Space Guidelines for a village of 203 people (2000 Census). We have also determined the cost of Repair/Renovation & Addition to the existing Clinic to meet the same ARPCF Space Guidelines.

A. The cost of a New Denali Commission 1,989 SF Medium Clinic in White Mountain is projected to be:

▪ Base Anchorage Construction Cost per s.f.			$183
▪ Project Cost Factor:		@ 45%	$ 82
Medical Equipment	17%		
Construction Contingency	10%		
Design Fees	10%		
Construction Administration	8%		
▪ Multiplier for Village		@ 1.712	$189
Adjusted Cost per SF			$454

Projected Cost of a New Clinic: 1,989 s.f. x $454 = $902,370
(not inclusive of site development costs)

B. The cost of the Repair/Renovation and Additions for the existing Clinic are projected to be:

▪ Code & Condition Repairs/Renovations			
Cost from Deficiency Summary			$269,485
▪ Remodel/Upgrade work (See Def. Code 01)			
100% of clinic 1,230 SF = 1,230 SF @ $138/SF			$170,170
▪ Additional Space Required by ARPCF (See Def. Code 06)			
○ Base Anchorage Cost			$226
Medical Equipment			$ 32
Additional Costs –			$ 98
General Requirements	20%		
Estimation Contingency	15%		
○ `Multiplier for Village		@1.712	$253
Adjusted Cost per SF			$609
Total Addition Cost of 709 SF @ $609			$431,541
Projected Cost Factor		@28%	$243,935
Construction Contingency	10%		
Construction Administration	8%		
Design Fees	10%		
Total Cost of remodel/addition			**$1,115,131**

C. Comparison of Existing Clinic Renovation /Addition versus New Clinic:

Ratio of Renovation/Addition versus New Clinic is:

$1,115,131 / $902,370 = 1.24 x cost of New Clinic

Based on Denali Commission standard of evaluation; the remodel/addition costs are more than 75% of the cost of new construction. A new clinic is recommended for this community.

D. Overall Project Cost Analysis:

The overall project cost analysis below incorporates land, multi-use, utility costs, and road access costs, and project management fees if any are associated with the project.

Item	Quantity	Units	Unit Cost	Area Adjustment Factor	Total Cost	Allowable under "Small" Clinic Process (yes/no)
Primary Care Clinic (Allowable)	1,989	SF	$265.00	1.712	$902,370	yes
Clinic (Non-allowable portion)	0	SF	$265.64	1.712	$0	no
Land	15,000	SF	$2.00	1	$30,000	yes
Multi-Use Facility Design Cost	0	LS	$0.00	1	$0	yes
Multi-Use Facility Construction Cost	0	LS	$0.00	1	$0	no
Utility Extension/Improvements	1	LS	$15,000	1	$15,000	yes
Road access & parking lot improvements	1	LS	$5,000	1	$5,000	yes
Subtotal Project Cost					$952370	
Project Management Fees					Unknown	
Total Project Cost					**Unknown**	

7. CONCLUSIONS AND RECOMMENDATIONS

The existing White Mountain clinic sits on a somewhat restricted site. Although it is located appropriately in the community, it is on a steep uphill site that makes access for the handicapped, sick and elderly challenging at best. Considering its spatial and structural deficiencies and the projected cost for renovations and additions at over 1.24 times the cost of new construction, the community would be well served with a new facility. The new site would preferably be on a site down slope from the street, which may allow level access into the facility.

The community expressed a desire for a new clinic but had not yet identified a site. It is, therefore, the recommendation of the consulting team that White Mountain receive a new clinic.

Appendix A: Specific Deficiencies Listings

The attached sheets represent the individual deficiencies identified for this project and the corrective action required to meet current codes and standards of construction. The deficiencies are further summarized in Section V. Summary of Existing Clinic Deficiencies.

Appendix B: Reference Photographs